

## ABSTRACT

The present invention is a system, mobile device and process. In a system, including a plurality of transmitters which transmit from at least one of the transmitters first and second complex sequences respectively from two spatially diverse antennas of the at least one transmitter to a mobile device, a method at the mobile device in accordance with the invention includes demodulating the first and second complex sequences to produce demodulated complex first and second sequences; detecting the demodulated first and second complex sequences to produce detected complex first and second sequences by multiplying respectively the demodulated first and second complex sequences with complex conjugates thereof; averaging a function of the complex detected first and second sequences to produce an averaged function; and processing the averaged function to detect a time, relative to a system time reference, of at least one peak therein resultant from the transmission of the first and second complex sequences.